

ACACIA (LEGUMINOSAE-MIMOSOIDEAE): A CONTRIBUTION TO THE FLORA OF CENTRAL AUSTRALIA

B. R. Maslin

Western Australian Herbarium, South Perth, Western Australia, 6151.

Abstract

The taxonomy of fifteen *Acacia* species from Central Australia is discussed. Seven new species are described, namely *A. abbreviata* (N.T.—a possible hybrid origin for this species is considered), *A. auricoma* (W.A. and N.T.—a very unusual species due to its possession of stellate hairs), *A. dolichophylla* (N.T.), *A. jamesiana* (W.A.), *A. latzii* (N.T.), *A. nelsonii* (N.T.) and *A. rhodophloia* (W.A. and N.T.—this name replaces *A. sibirica* auct. non S. Moore). The following names are here relegated to synonymy for the first time: *A. coronalis* J.M. Black (under *A. victoriae* Benth.), *A. dentifera* var. *intermedia* S. Moore and *A. graffiana* F. Muell (under *A. hemiteles* Benth.), *A. dentifera* var. *parvifolia* S. Moore (under *A. prainii* Maiden) and *A. genistoides* A. Cunn. ex Benth. (under *A. tetragonophylla* F. Muell.). Notes are provided regarding J.M. Black's synonymy of *A. prolifera* J.M. Black (under *A. prainii* Maiden) and D.J. Whibley's synonymy of *A. sowdenii* Maiden (under *A. papyrocarpa* Benth.). A brief discussion of the *A. brachystachya* group is given (including the species *A. brachystachya* Benth., *A. linophylla* W.V. Fitzg. and *A. ramulosa* W.V. Fitzg.) and also notes as to why *A. melleodora* Pedley is not treated separately from *A. dictyophleba* F. Muell. Lectotypification is effected for seven taxa, namely *A. dentifera* var. *parvifolia* S. Moore, *A. genistoides* A. Cunn. ex Benth., *A. graffiana* F. Muell., *A. hemiteles* Benth., *A. papyrocarpa* Benth., *A. prainii* Maiden and *A. tetragonophylla* F. Muell.

Introduction

The main purpose of this paper is to validate new names used in my account of *Acacia* in the 'Flora of Central Australia' (in press), to effect the synonymy of a number of species within the region and to comment on the taxonomic status of others occurring there. A phytogeographical analysis of the 116 taxa in Central Australia will be published elsewhere (Maslin and Hopper, in preparation). The taxa are presented alphabetically by specific name and a list is given at the end of the paper of the numbered specimens seen for the new species described.

1. *Acacia abbreviata* Maslin sp. nov. (Fig. 1.)

Frutex expansus ad 60 cm altus et 2 m diam.; *ramuli* glabri vel glabrescentes. *Stipulae* 1-1.5 mm longae. *Phyllodia* fasciculata (in surculis novellis solitaria), linearia ad anguste oblonga, 4.5-10 (25) x 0.8-1.2 mm, glabra, lateraliter mucronulata. *Inflorescentia* axillaria; *spicae* 8-15 mm longae; *pedunculi* 8-18 mm longi. *Flores* 5-meri. *Legumina* linearia sed ad basim angusta, ad 6.5 x 0.5 cm, sublignosa, plana, resinosa, glabra. *Semina* in legumine obliqua; *funiculus-arillus* strictus, anguste turbinatus.

Type: Tanami, 20°00'S, 129°40'E, Northern Territory. "Small bushy shrub to 2 ft. high, stems and branches spreading. Localized to drainage areas on stony spinifex plain." 25 May 1970, J.R. Maconochie 1026. Distributed as *Acacia amentifera* F. Muell. (holo: PERTH; iso: K, MEL, NT, PERTH).

Bushy, spreading, infundibular *shrubs* to 60 cm tall and 2 m diam.; *bark* smooth and grey; *branchlets* resinous, terete, very obscurely nerved, apically yellow but becoming (reddish-) brown with age, glabrous or glabrescent. *Stipules* persistent, narrow-triangular, 1-1.5 mm long, ascending, scarious, brown. *Phyllodes* at first solitary (on new shoots) but soon developing clusters of up to 6 per node, linear to narrow-oblong but often slightly tapered towards the base, 4.5-10 mm long (one sample with new shoots the phyllodes to 25 mm), 0.8-1.2 mm wide, L/W = 3.5-14 (30-new shoots), rather spreading, straight to slightly curved or very shallowly sigmoid, resinous (at least when young), glabrous, compressed yet thick or sometimes almost terete, longitudinally wrinkled when dry, very obscurely longitudinally multistriate; *apices* distinctly yet minutely

mucronulate (mucro laterally positioned, acute and slightly sharp); *pulvinus* obscure; *gland* very obscure, situated on upper margin of phyllode 2-3 mm above the pulvinus, often comprising a tiny orifice with no associated yellow rim. *Inflorescences* simple (not racemose) and axillary, 1 per node; *spikes* short (8-15 mm long), sometimes obloid when in bud; *peduncles* 8-18 mm long, as long as or longer than spikes, glabrous. *Bracteoles* c. 1 mm long, claws \pm linear and expanded into inflexed, thickened, ovate, acute laminae. *Flowers* 5-merous, 2-2.5 mm long, buds subacute; *calyx* c. $\frac{1}{2}$ length of corolla, glabrous, obscurely 5-nerved, dissected $\frac{1}{3}$ - $\frac{1}{2}$ its length into oblong, subacute lobes with distinctly concave sinus between them; *petals* connate for c. $\frac{1}{2}$ their length, glabrous, 1-nerved. *Legumes* erect, linear but narrowed towards their bases, to 6.5 cm long and 5 mm wide, splitting elastically from apex, straight but valves curved following dehiscence, subwoody, flat, resinous, glabrous, dark brown, obliquely longitudinally nerved (nerves yellowish), apices thick and uncinat; *margins* thick, yellow and not constricted between seeds. *Seeds* (slightly immature) oblique to longitudinal in legume, obloid, c. 3.5 x 1 mm, medium brown; *pleurogram* obscure, situated near periphery of seed; *funicle-aril* narrow-turbinate, straight.

Distribution (Fig. 8)

Known only from Northern Territory in the vicinity of Tanami (19° 59'S, 129° 43'E) near the Western Australian border. Although *A. abbreviata* has not been collected within the Central Australia region it occurs close to its northern border (i.e. 20° S) and future sampling may well record it for the area as well as for W.A.

Habitat

Laterite or clay-loam over laterite with Spinifex (*Triodia basedowii*, *T. spicata*) and *Eucalyptus brevifolia*. The species is sometimes localized in drainage areas.

Flowering and fruiting period

Flowers from May to July and legumes with near-mature seeds have been collected between August and October.

*Specimens examined**

NORTHERN TERRITORY: Tanami, 2 mi. (3.4 km) W of old mine, 19° 58'S, 129° 43'E, C.R. Dunlop 2342 (BRI, CANB, NSW, NT); 6 km from Tanami towards Western Australian border, C.H. Gittins 2303 (BRI); About 2 mi (3.4 km) N.W. of Tanami Bore, N.M. Henry 500 (NT, PERTH); Tanami Mining Camp, 19° 57'S, 129° 50'E, J.R. Maconochie 1099 (AD, BRI, MEL, NSW, NT, PERTH) and 1100 (DNA, NSW, NT); 3 km S.W. of Tanami Mine, 19° 58'S, 129° 40'E, J.R. Maconochie 1632 (BRI, CANB, DNA, NSW, NT, PERTH); Tanami, 29° 58'S, 129° 43'E, J.R. Maconochie 1726 (NSW, NT, PERTH).

Judging from morphological evidence it is quite possible that *A. abbreviata* represents a natural hybrid between *A. hilliana* Maiden (sect. *Juliflorae*) and *A. minutifolia* (sect. *Plurinerves*). All three species are low, spreading shrubs with resinous branchlets, have persistent stipules, glabrous, obscurely nerved, mucronulate phyllodes, 5-merous flowers and all possess the same basic carpological features. Some of the characters suggesting hybrid origin for *A. abbreviata* are given in Table I. All three species are known to grow in the region of Tanami which is the only locality known for *A. abbreviata*. Detailed field studies are required to examine the possible hybrid population(s) but these studies have not as yet been carried out due to the remoteness of the locality. The close relationship between sect. *Juliflorae* and sect. *Plurinerves* has been reported in recent literature viz. Pedley (1978), Pettigrew and Watson (1975) and Vassal (1972). Therefore it would not be too surprising if *A. abbreviata* is subsequently shown to be a natural hybrid between species from these two sections although it is noted that natural hybridity within *Acacia* is not a commonly reported event.

* I have seen only those specimens lodged at AD, BRI, PERTH and NT; the other herbaria listed are noted on the original NT labels as having been donated duplicates.

Table 1. Some of the morphological features showing *A. abbreviata* intermediate between *A. hilliana* (sect. *Juliflorae*) and *A. minutifolia* (sect. *Plurinerves*).

Character	<i>A. hilliana</i>	<i>A. abbreviata</i>	<i>A. minutifolia</i>
Branchlets	Glabrous	Glabrous or glabrescent	Puberulous
Phyllodes	Solitary (rarely tardily fasciculated) 20-60 mm long terete (rarely flat)	Fasciculate 4.5-10 (25) mm long flat (yet thick), sometimes \pm terete	Fasciculate c. 2 mm long flat (yet thick)
Flower-heads	Distinctly cylindrical (1) 2-4 cm long	Short cylindrical 0.8-1.5 cm long	Globular, c. 0.6 cm diam.
Flower-buds	Not attenuate	Somewhat attenuate	Distinctly attenuate
Calyx	Deeply dissected, sinus distinct between lobes	Deeply dissected, sinus distinct between lobes	Shallowly dissected, sinus indistinct

Acacia amentifera F. Muell. and *A. conjunctifolia* F. Muell. are also resinous shrubs with small, fasciculate phyllodes but *A. abbreviata* is readily distinguished from these species by its less prominently ribbed branchlets, its narrower, thicker, less flattened phyllodes, its longer peduncles and its sepals which are united for about half their length. The types of both *A. amentifera* and *A. conjunctifolia* were collected from the Victoria River area about 300 km north of Tanami.

The specific epithet refers to the very short phyllodes.

2. *Acacia auricoma* Maslin sp. nov. (Fig. 2.)

Frutex 2.5 m altus; *rami* phyllodia et legumina modice ad dense minute stellato-pilosa. *Stipulae* transverse triangulares, 1-1.5 x 1.2-2 mm. *Phyllodia* oblique elliptica ad late-elliptica, 3-10 x 1.5-4 cm, L/B = 1.5-2.5, coriacea, obtusa, (3)4(5)-nervata, nervis aliquot ad basim cum margine confluentibus, reticulata. *Inflorescentiae* axillares, ad apices ramulorum vel recemosae vel paniculatae ob phyllodia reducta; *pedunculi* ad anthesin 2-3 cm longi et pilis aureis stellata; *capitula* globulosa, c. 130-floribus. *Florae* 5-merae; *calyx* et *corolla* apicem versus aurea puberula. *Legumina* anguste-oblonga, ad 8 cm x 1.5-2 cm, plana, reticulata. *Semina* in legumine transversa, obloidea, 6-6.5 x 3-3.5 x 2 mm.

Type: Bloods Range, 24°43'S, 129°01'E, Northern Territory. "Erect shrub to 2 m, inflorescence golden brown, falling rapidly when dry; bark smooth. Growing on scree slopes with Spinifex and occasional bloodwood, mulga, solanum; *Plect. melvillei*, multi-stemmed." 10 April 1972, J.R. Maconochie 1395. Distributed as *Acacia* sp. nov. affinity *A. retivenia* (holo: PERTH; iso: AD, B, BRI, CANB, DNA, K, MEL, NSW, NT. I have seen only the K, NT and PERTH sheets).

Erect, rather scraggly, sparsely branched, multi-stemmed *shrubs* to 2.5 m tall; *bark* smooth; branches terete, very finely nerved (apically somewhat coarsely nerved), reddish-brown, moderately to densely minutely stellate hairy (hairs white but often golden towards branch apices); *new shoots* golden. *Stipules* sub-persistent, shallow-triangular, 1-1.5 mm long, 1.2-2 mm wide, dark brown, densely stellate-hairy abaxially, glabrous adaxially. *Phyllodes* asymmetrically elliptic to broad-elliptic, 3-10 cm long, 1.5-4 cm wide, L/B = 1.5-2.5, coriaceous, minutely stellate-hairy, subglaucous, drying greyish-green, obtuse; longitudinal *nerves* (3)4(5), yellowish, raised when dry, some confluent with lower margin for up to c. 1 cm above the pulvinus, the 2 lower nerves ending at the apex, the remainder frequently intersecting the upper margin at indentations which are usually gland-bearing, lateral nerves transversely anastomosing and forming a prominent reticulum; *pulvinus* 3 mm long, transversely rugose; *gland*



Fig. 1. *Acacia abbreviata* sp. nov.
(J.R. Maconochie 1026, holotype—PERTH).

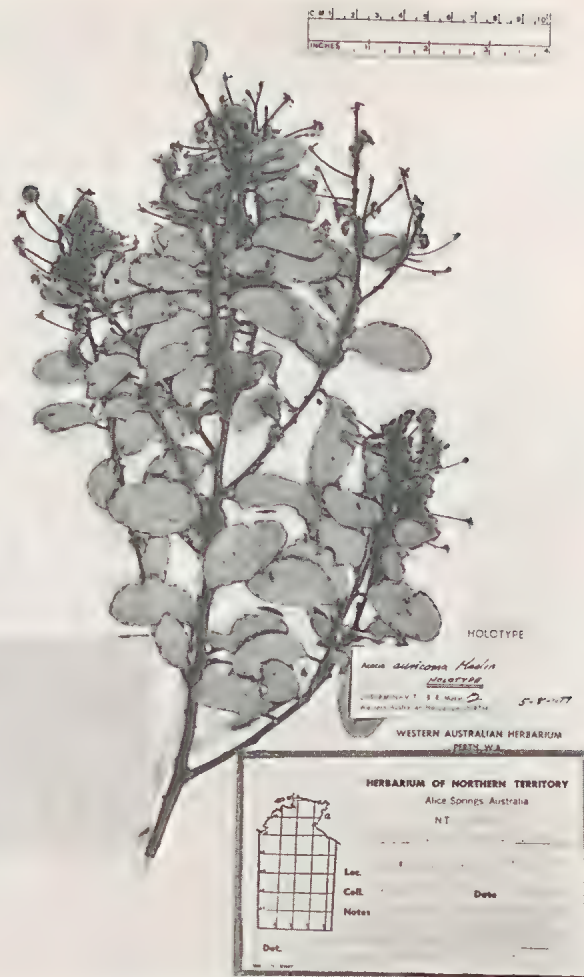


Fig. 2. *Acacia auricoma* sp. nov.
(J.R. Maconochie 1395, holotype—PERTH).

prominent on upper margin of phyllode at distal end of pulvinus, elliptic, 1-1.5 mm long, lip yellow, orifice slit-like, 2-4 smaller glands along the upper margin of the phyllode which is indented about these structures. *Inflorescences* simple and axillary but terminally racemose or paniculate due to phyllode reduction; *peduncles* 2-3 cm long, to 4.5 cm when in fruit, thick, longitudinally nerved, golden stellate-hairy at anthesis, indumentum white on fruiting specimens; *receptacles* capitate; *flower-heads* globular, large, dense, c. 130-flowered, brownish-golden. *Bracteoles* linear-spathulate, 2.5 mm long; *laminae* slightly inflexed, thickened, dark brown, densely puberulous abaxially, glabrous adaxially. *Flowers* 5-merous, to 2.5 mm long; *calyx* $\frac{3}{5}$ length of corolla, dissected $\frac{1}{4}$ - $\frac{1}{2}$ its length into narrow-oblong lobes often with hyaline margins, lobe apices slightly dilated concave and densely golden puberulous, calyx tube light brown and glabrescent; *corolla* gamopetalous, connate for $\frac{2}{3}$ its length with the free portions densely golden puberulous, the tube glabrous and brown but petals separated by membranous hyaline tissue. *Legumes* narrow-oblong, to 8 cm long, 1.5-2 cm wide, \pm straight, flat, firmly chartaceous, transversely reticulate, minutely stellate hairy, not or rarely slightly constricted between seeds, narrowly winged (wing more evident along one margin). *Seeds* transverse in legume, obloid, somewhat compressed, 6-6.5 mm long, 3-3.5 mm wide, 2 mm thick, dark brown; *pleurogram* fine, open towards the hilum; *areole* c. 4 x 1.5 mm; *funicle* thickly filiform, 1.5 mm long, brownish, abruptly expanded into a thick, white, non-folded, conic *aril*.

Distribution (Fig. 8)

Restricted to the Western Australia-Northern Territory border area in the region of Docker River where it extends from Anne Range, W.A. (c. 24°47'S; 128°47'E) east to Bloods Range, N.T. (c. 24°43'S, 129°01'E) and Petermann Ranges, N.T. (c. 25°S, 129°30'E).

Habitat

Grows in skeletal soil on quartzite scree slopes with "spinifex" (*Plectrachne melvillei*, *Triodia spicata* and *T. pungens*) and occasional shrubs or trees (*Acacia aneura*, *Eucalyptus brevifolia*, *E. odontocarpa* and *Solanum* sp.).

Flowering and fruiting period

Flowering specimens have been collected in April and August. Young legumes are present on the plants in July-August and reach maturity in October.

Specimens examined

WESTERN AUSTRALIA: Near E. end of Anne Range, \pm 24°47'S, 128°47'E, A.S. George 12094, per S. Carlquist (PERTH).

NORTHERN TERRITORY: Shaw River, East Petermann Range, W. H. Butler 7 (PERTH); About 18 km N of Docker Aboriginal Mission, 24°43'S, 129°03'E, N.N. Donner 4455 (NT); Hull River, 12 mi (19 km) E of Docker River Settlement, P.K. Latz 863 (NT); Lassiter's Cave, 25°02'S, 129°24'E, P.K. Latz 4159 (CANB, DNA, NT, PERTH); Churnside Creek area, 107 mi (171 km) W of Ayers Rock, J.R. Maconochie 661 (NT).

Acacia auricoma is a member of Bentham's (1864) series *Plurinerves-Dimidiatae*. It appears to be most closely related to the desert-subtropical species *A. retivenia* F. Muell. which normally also occupies rocky habitats and has the same basic phyllode nervature (except that its principal longitudinal nerves are not basally confluent and its reticulum is more pronounced), inflorescence structure and carpological features. *Acacia auricoma*, however, is readily distinguished by its minutely stellate branch, phyllode, peduncle and legume indumentum (softly tomentose and comprising simply hairs in *A. retivenia* except the legume which is glabrous), its golden (not white) calyx and corolla indumentum and its non-aculeolate bracteoles. Stellate hairs are known from three other members of the *Plurinerves-Dimidiatae* viz. *A. flavescens* A. Cunn. ex Benth., *A. leptoloba* Pedley (both Queensland species) and *A. sericata* A. Cunn. ex Benth. (NW Kimberleys, W.A.) but

A. auricoma differs from all these species in its simple, axillary (not racemose) inflorescences and its phyllodes which are proportionately shorter.

The specific epithet refers to the conspicuous golden indumentum of the new shoots, flowering peduncles and sepal and petal apices.

3. ***Acacia basedowii*** Maiden, J. Roy. Soc. N.S.W. 53: 197 t.13 ff. 1-6 (1920).

Holotype: Musgrave Ranges, 1903, *H. Basedow* 70 (NSW).

Acacia basedowii var. *viridis* Blakely, Austral. Nat. 11: 9 (1944), *synon. nov.*

Holotype: Stanley Chasm, 40 mi W of Alice Springs, 17.7.1939, *Mrs. B.A. Dale*, per *Jean Buckingham* (NSW).

Through the courtesy of the National Herbarium, Sydney (NSW), I have compared the holotypes of these taxa. Although the type of var. *viridis* does show some differences from that of the typical variety (as noted by Blakely l.c.) when a large range of material is examined it is evident that these differences can be accommodated within the natural range of variation for the species and that varietal segregation is not justified.

4. ***Acacia brachystachya*** group

These notes are presented in order to explain the approach I have adopted regarding this very complex species-group in my Flora of Central Australia account. As noted by both Pedley (1973, 1978) and Whibley (1980) the *A. brachystachya* group has affinities with *A. aneura* F. Muell. ex Benth. (Mulga), a species distinguished principally by its flat, winged, \pm glabrescent, non-striate legumes.

Species of the *A. brachystachya* group* are woody shrubs or trees characterized by longitudinally multistriate phyllodes, normally spicate inflorescences and cylindrical or somewhat flattened legumes which are characteristically longitudinally brown-striate with a dense, appressed, silvery indumentum between the nerves. Generally speaking members of this group have been distinguished from one another by the width and transverse sectional shape (\pm flat vs. terete) of their phyllodes and legumes. Following an examination of a wide range of herbarium material, from limited field observations in both Western Australia and Northern Territory and from a consideration of the literature it is evident that there is much variation in these "diagnostic" characters. Certainly further critical studies are required in order to gain a clearer understanding of this variation but the following suggestion is offered as a possible explanation of the existing taxonomic complexities in the group: as a consequence of apparently uncorrelated, continuous variation in two principal characters, viz. phyllode and legume transverse sectional shape and size, the existing species appear to represent no more than arbitrary points at some intersections of non-parallel clines for these characters.

In the Flora of Central Australia a description is provided which includes the variational ranges of *A. brachystachya*, *A. linophylla* and *A. ramulosa*. The species are not treated separately but are referred to collectively as the *A. brachystachya* group. Brief notes regarding these three species are now presented.

(a) *A. brachystachya* Benth. and *A. ramulosa* W.V. Fitzg. In the two recent accounts of *Acacia* already referred to, both Pedley and Whibley recognized *A. brachystachya* and *A. ramulosa* as distinct species—the former species having short (3-6 cm), rather flat legumes and flat or nearly terete phyllodes and the latter species having long (7-13 cm), terete legumes and flat or terete phyllodes. Considering the range of variation of material

*This group comprises *A. brachystachya* Benth. (syn. *A. cibaria* F. Muell.), *A. linophylla* W.V. Fitzg. and *A. ramulosa* W.V. Fitzg. *Acacia subtessarogona* Tindale et Maslin has affinities here also but because it occurs outside Central Australia and because it is readily recognized by its subtetragonous legumes it is not included in the present discussion.

under these two names at PERTH and also taking into account my comments under *A. linophylla* below, it seems that the distinction between *A. brachystachya* and *A. ramulosa* is rather indefinite.

Pedley (1978, p. 131) discussed the typification of *A. cibaria* F. Muell. and by selecting Beckler's "Yayinya Mountains" specimen as lectotype has rendered this name synonymous with *A. brachystachya*. I agree with Pedley's typification and general treatment of *A. cibaria* except for his comments regarding the syntype, Gascoyne River, Oliver Jones. I have examined this material (legumes and seeds only) at MEL and found it agreeing with other W.A. material referable to the *A. brachystachya* group (legumes flatter and a little broader than normal though—see *A. linophylla* below). This syntype is definitely not *A. wanyu* Tindale as suggested by Pedley.

(b) *A. linophylla* W.V. Fitzg. This species was described in the same publication as *A. ramulosa* and even though the types of both taxa are in fruit Fitzgerald did not allude to their obvious similarity. Apparently *A. linophylla* is a terete phyllode member of the *A. brachystachya* group but there appears to be continuous gradation to distinctly flat phyllode forms (these flat forms are generally called *A. brachystachya* or *A. ramulosa*, depending on their legume morphology). All terete phyllode individuals that I have seen possess either cylindrical or somewhat compressed legumes which are often broader (to 15 mm) than those found in other members of the group. Quite possibly the Oliver Jones syntype of *A. cibaria* referred to above fits here. In W.A. the terete phyllode individuals occupy much the same geographical range as those with flat phyllodes; they are common in the Murchison and Ashburton districts but have been recorded as far east as the Warburton Range. In South Australia and Queensland both Whibley (1980) and Pedley (1978) refer to terete phyllodes under *A. ramulosa*. It is therefore possible that future work will reveal that *A. linophylla* should not be maintained as a distinct species.

5. *Acacia dictyophleba* F. Muell.

Pedley (1978) described *A. melleodora* and distinguished it from *A. dictyophleba* on the basis of smaller, less coarsely veined phyllodes and smaller flowers and flower-heads. The name *A. dictyophleba* was applied to plants from the Simpson Desert while *A. melleodora* was applied to the more widely distributed element extending from Queensland to Western Australia. From an examination of a large range of W.A. material it appears that at least in this State (and probably also in western Northern Territory) these supposed distinguishing characters for *A. melleodora* do not hold. In the absence of any significant additional characters it seems prudent, for the purpose of the Flora of Central Australia at least, to use the well known name *A. dictyophleba* and to treat the taxon as a single variable species. It is recognized, however, that future work may well invalidate this decision.

6. *Acacia dolichophylla* Maslin sp. nov. (Fig. 3.)

Frutex ad 3.5 m altus; *rami* apicem versus minute appresso-puberuli. *Stipulae* caducae. *Phyllodia* linearia, acuminata, 12-19 cm x 1-2 mm, plana, stricta, glabrescentia, 3-nervata, nervis discretis, non-anastomosantibus. *Inflorescentia*: racemus brevissimus 2-5-ramosus; *pedunculi* 10-13 mm longi; *capitula* globulosa. *Flores* 5-meri; *sepala* libera. *Legumina* late-linearia, ad 10 cm longa, 6-7 mm lata, \pm chartacea. *Semina* in legumine longitudinalia, ellipsoidea, 4.5 x 3 mm.

Type: Mount Giles, 23° 39'S, 132° 55'E, Northern Territory. "Shrub to 3 m with smooth bark. Infrequent in skeletal soil, on slopes of gully in schistose hill." 19 Sept. 1976, P.K. Latz 6606 (holo: PERTH; iso: CANB, K, NT—I have seen only the NT and PERTH specimens).

Dense, bushy, rounded *shrubs* to 3.5 m tall; *bark* smooth, greyish; *branches* straight, spreading-erect and sparsely divided, terete, finely ribbed (ribs yellowish and most

obvious immediately below insertion of phyllodes), red-brown to grey-brown, apically minutely appressed white puberulous, bronze resin hairs present on young growth. Stipules caducous. *Phyllodes* linear but narrowed at apices into delicate straight or curved innocuous points, 12-19 cm long, 1-2 mm wide, flat, straight, not rigid, olive green, glabrescent, with 3 longitudinal nerves on each face (nerves raised and distant), not anastomosing; *pulvinus* cylindrical but grooved adaxially, 1-2 mm long, transversely wrinkled, yellowish; *gland* obscure, situated on adaxial margin of phyllode 1-3 mm above the pulvinus. *Inflorescences* very condensed 2-5-branched racemes with puberulous axes 0.5-2 mm long; *peduncles* 10-13 mm long, sparsely to moderately appressed white puberulous, some bronze resin hairs also normally present; *flower-heads* globular, pale yellow. *Bracteoles* 1.3 mm long, puberulous; *claws* linear; *laminae* ovate, inflexed, concave and slightly thickened. *Flowers* 5-merous, 2-3 mm long; *calyx* c. $\frac{1}{2}$ length of corolla, sepals free, linear-spathulate and apically ciliolate; *petals* connate for $\frac{2}{3}$ their length, glabrous, obscurely 1-nerved; *ovary* densely tomentose. *Legumes* broad-linear, to 10 cm long, 6-7 mm wide, \pm chartaceous but slightly cartilaginous when young, slightly undulate, nerveless, flat but raised over and normally only slightly constricted between the seeds, glabrescent and slightly shiny at maturity (antrorsely puberulous when young with an admixture of white and bronze resinous hairs), dark brown but greyish-brown when young, rather abruptly narrowed at both ends; *margins* thickened, narrow and yellowish. *Seeds* (slightly immature) longitudinal in legume, ellipsoid, 4.5 mm long, 3 mm wide, greyish-brown; *pleurogram* yellowish, open towards the hilum; *areole* 2.5 x 1.2 mm; *funicle* filiform, folded below and gradually expanded into a slightly thickened *aril*.

Distribution (Fig. 8)

Known only from the Chewings Range, Northern Territory, in the vicinity of Mount Giles (23° 39'S, 132° 55'E).

Habitat

Appears to be restricted to steep, sheltered gullies in relatively nutritious (although skeletal) soils around Mt Giles. The rocks in this area are meta-quartzite and quartz-sericite schists unlike most of the other mountain ranges in the area which consist predominantly of quartzites (P.K. Latz, pers. comm.)

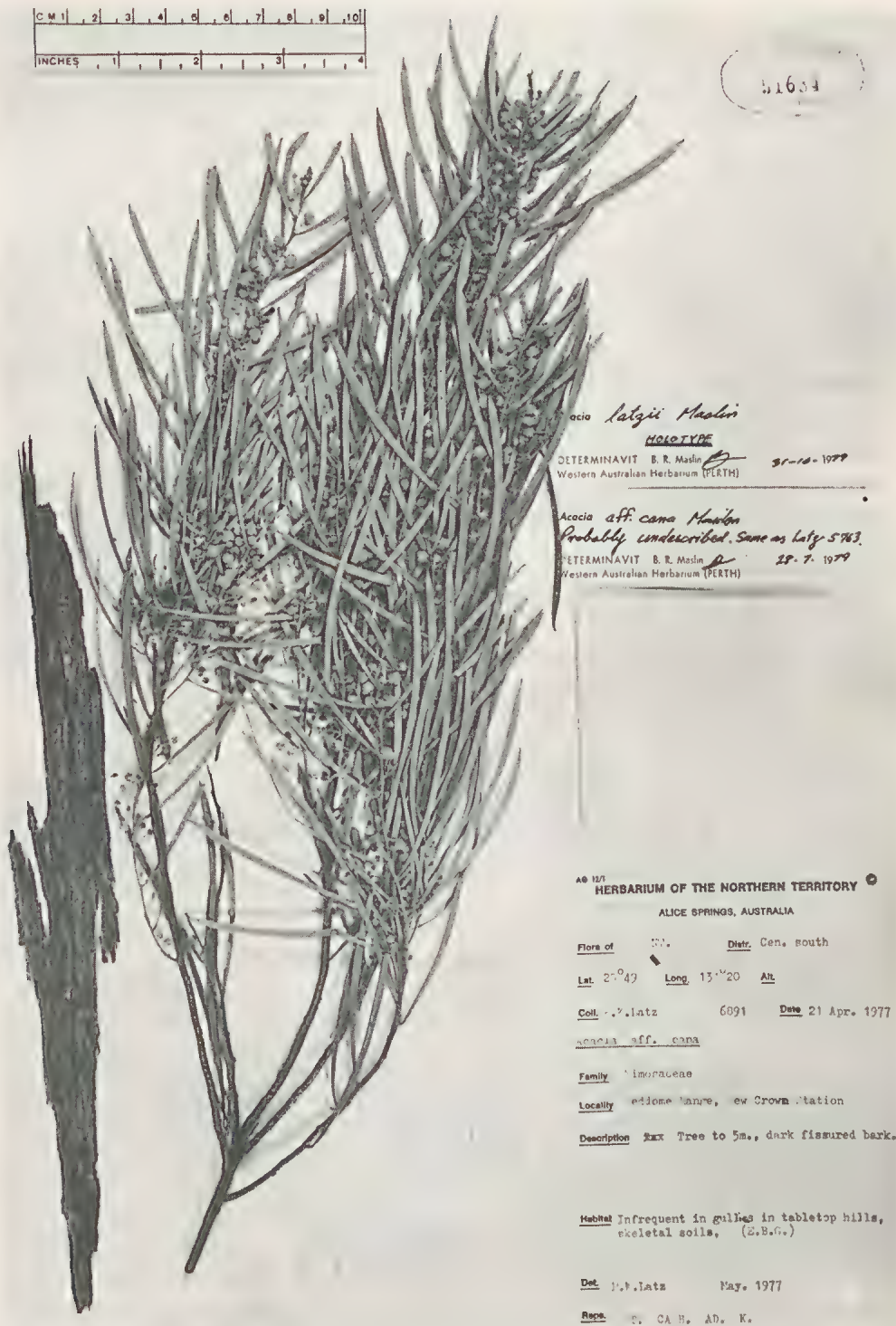
Flowering and fruiting period

Because of the paucity of collections it is difficult to accurately establish flowering and fruiting times. However, from specimens to hand, flowering occurs in July and near-mature fruits occur in late September.

Specimens examined

NORTHERN TERRITORY: Chewings Range, 23° 39'S, 132° 58'E, P.K. Latz 6642 (CANB, BRI, NT, PERTH); Mt Giles area, 23° 42'S, 132° 54'E, 14 July 1975, J. Wauchope s.n. (NT).

Using Bentham's (1864) classification this new species should be placed in series *Plurinerves-Oligoneurae*. In its long, linear phyllodes with 3 nerves on each face, its globular flower-heads and its free sepals *A. dolichophylla* has affinities with the tropical species *A. praelongata* F. Muell. but differs in its hairy branchlets, its acuminate phyllodes and its very condensed racemes. Judging from Mueller's (1887) illustration of *A. praelongata*, carpological features of the two species are not dissimilar. However, the legumes of *A. dolichophylla* are narrower, the funicle thicker and more folded and the areole larger. In its 3-nerved phyllodes and inflorescence characters *A. dolichophylla* is allied to the desert species *A. estrophiolata* (both species grow in the Chewings Range area, the only locality known for the new species) but differs in its longer, narrower phyllodes and its carpological features, i.e. legumes not reticulate or narrowly winged or breaking easily at constrictions between the seeds; the seeds are also slightly arillate. Additionally *A. dolichophylla* is a shrub, not a tree, and does not have the same graceful



Acacia latzii Maslin
HOLOTYPE
DETERMINAVIT B. R. Maslin B 31-10-1979
Western Australian Herbarium (PERTH)

Acacia aff. *cana* Maslin
Probably undescribed. Same as *latzii* 5743.
DETERMINAVIT B. R. Maslin B 28-7-1979
Western Australian Herbarium (PERTH)

AS 12/1
HERBARIUM OF THE NORTHERN TERRITORY
ALICE SPRINGS, AUSTRALIA

Flora of NT. Distr. Cen. south
Lat. 25°49' Long. 133°20' Alt.
Coll. P.K. Latz 6891 Date 21 Apr. 1977
Acacia aff. *cana*
Family Mimosaecae
Locality Edieme Nature, New Crown Station
Description Shrub Tree to 5m., dark fissured bark.

Habitat Infrequent in gullies in tabletop hills,
skeletal soils. (Z.B.G.)

Det. P.K. Latz May. 1977
Reps. C. CA H. AD. K.

Fig. 5. *Acacia latzii* sp. nov. (P.K. Latz 6891, holotype—NT).

drooping habit of *A. estrophiolata*. Another species bearing some relationship with the new species is *A. tenuior* Maiden. This species is known only from the type which was collected by Herbert Basedow in the Musgrave Ranges (about 300 km south of Chewings Range). Both species have long, 8-nerved phyllodes, globular flower-heads and free sepals but unlike *A. dolichophylla* the phyllodes of *A. tenuior* are terete. Legumes are unknown for *A. tenuior*.

The specific epithet refers to the very long phyllodes.

7. *Acacia hemiteles* Benth., Linnaea 26: 619 (1855).

Lectotype: Swan River, *Drummond* 47 (K, right hand specimen on sheet stamped Herbarium Hookerianum, 1867; iso-*lectotype*—K), *lecto. nov.*

A. graffiana F. Muell., Chem. and Druggist of Australas. 2(5): 118 (1887), *synon. nov.*

Lectotype: "Acacia graffiana F.v.M. W.A. J. Dr." (MEL, flowering specimen annotated by Mueller; iso-*lectotype*—PERTH), *lecto. nov.* *Lectoparatype*: "Acacia graffiana F.v.M. West Australia, James Drummond" (K and MEL, fruiting specimens annotated by Mueller).

Acacia dentifera Benth. var. *intermedia* S. Moore, J. Proc. Linn. Soc. Bot. 45: 174 (1920), *synon. nov.*

Holotype: Nungarin, Western Australia, 1916, F. Stoward 302 (BM; isotype—PERTH).

Having inspected the type collections of all three names given above I have no hesitation in regarding them as synonymous. The confusion surrounding the name *A. hemiteles* seems to have arisen as a consequence of Bentham (1864, p. 369) erroneously synonymizing this taxon under *A. subcaerulea* Lindl. (1827). Subsequently Mueller described the true *A. hemiteles* as *A. graffiana* under which name it became well known in Western Australia.

Although *A. hemiteles* has not been recorded for Central Australia it is included in my key to species for the Flora because it does occur around Queen Victoria Spring (30° 26'S, 123° 34'E) and future collecting may well extend its range into the region.

8. *Acacia jamesiana* Maslin sp. nov. (Fig. 4.)

Frutex vel arbor 3-5 m alta; *ramuli* sparsim appresso-puberuli. *Phyllodia* linearia-tetragona (in sectione transversali rhombea), raro plana, (8) 10-22 cm x 1-2(3) mm, aliquanto rigida, subulata, aliquanto pungentia. *Inflorescentia* axillaria, solitaria; *pedunculi* 2-6 mm longi, interdum ad 15 mm in fructu; *capitula* densa, obloidea, ante anthesin 6-8 x 4-5 mm, L/B = 1.5. *Flores* 5-meri; *calyx* irregulariter lobatus; *petala* obscure 1-nervata. *Legumina* linearia, ad c. 12 cm x 4 mm, cartilaginea ad sublignosa. *Semina* in legumine longitudinalia, obloidea-ellipsoidea, 5-6 x c. 2.5 x 2 mm, niger.

Type: 13 miles (21 km) NE of Wiluna, Western Australia. "Spreading shrub 3 m. On sand dune." 28 July 1963, A.S. George 5610 (holo: PERTH; iso: PERTH).

Spreading, bushy trees or shrubs 3-5 m tall; branches terete, finely nerved, reddish-brown but with a light grey longitudinally cracking epidermis; branchlets ± resinous, rather sparsely appressed silvery puberulous but hairs normally dense around phyllode bases; new shoots resinous, indumentum dense and comprising a mixture of bronze and silvery appressed hairs, the bronze hairs soon disappearing. Stipules caducous. Phyllodes linear-tetragonous (rhombic in cross section) or rarely flattened but then with a raised central nerve, nerves at apices of angles rather broad (to 3 mm) and yellowish-green while those on the intervening faces are very indistinct and range from 3-6 in number, (8) 10-22 cm long, 1-2(3) mm wide, slightly curved, rather rigid, slightly resinous, glabrous or silvery appressed puberulous between nerves at maturity, drying yellowish-green, greyish-green or light olive green; apices subulate, straight and coarsely pungent; pulvinus c. 2 mm long, obscurely transversely wrinkled, densely tomentose adaxially; gland on adaxial side of phyllode at distal end of pulvinus or to 2 mm above it, lamina slightly swollen about the gland, lip indistinct, orifice sometimes well developed. Inflorescences axillary and solitary, often borne at the base of rudimentary shoots which grow out;

peduncles 2-6 mm long, sometimes to 15 mm when in fruit, longitudinally sulcate when dry, rather sparsely appressed silvery puberulous, basal bracts solitary and caducous; *flower-heads* dense, obloid, 6-8 x 4-5 mm just prior to anthesis, L/B=1.5, c. 40-flowered; *receptacles* thicker than peduncles, longitudinally ridged and with rather obvious flower scars when in fruit. *Bracteoles* 1.5 mm long, \pm sparsely puberulous; *claws* linear; *laminae* ovate, apically acute, inflexed, somewhat thickened, brown. *Flowers* 5-merous, 2.5 mm long; *calyx* c. $\frac{1}{2}$ length of corolla, variably dissected $\frac{1}{4}$ - $\frac{3}{4}$ its length into oblong lobes which are distally inflexed thickened brownish and puberulous, tube nerveless and sparsely puberulous; *petals* connate for c. $\frac{3}{4}$ their length, obscurely 1-nerved, moderately puberulous abaxially. *Legumes* linear, to c. 12 cm long, 4 mm wide, cartilaginous to subwoody, brownish, slightly resinous, sparsely appressed puberulous, longitudinally wrinkled when dry, flat but raised over and very slightly constricted between seeds, somewhat twisted when young; *margins* thickened and laterally broad. *Seeds* longitudinal in legume, obloid-ellipsoid, \pm narrowed towards margins, 5-6 x c. 2.5 x 2 mm, blackish, shiny; *pleurogram* open towards the hilum, bordered by a diffuse band of yellowish tissue; *areole* c. 1 x 0.7 mm; *funicle* flattened, folded below a thickened pale yellow *aril* which extends c. $\frac{1}{3}$ down one side of the seed.

Distribution (Fig. 8)

Relatively common in the arid Austin Botanical District, Western Australia, from the vicinity of Mount Magnet east to Leinster Downs station and northeast to Wiluna. The species also extends north to the southern tip of the Little Sandy Desert in the region of the Carnarvon Range and also east to the Gibson Desert about 120 km west of Giles.

Habitat

Seems to be restricted to sand dune country.

Flowering and fruiting period

Judging from herbarium material flowering seems sporadic and probably extends throughout much of the year. Flowering specimens to hand (mostly bearing buds, flowers at anthesis and frequently also developing legumes) were gathered between July and November. I have not seen any specimens gathered between December and June. Legumes with mature seeds have been collected in late October, this specimen also possessed flowers at anthesis.

Selected specimens

WESTERN AUSTRALIA: Iona Station near Mount Magnet, J.S. Beard 6665 (PERTH); Leinster Downs, near Perserverence Well, M. Blackwell 19 and 20 (PERTH); Gibson Desert, 118 km W of Giles, 24°51'S, 127°16'E, R. Buckley s.n. (NT 59902); Carnarvon Range and vicinity, A.A. Burbidge 11 (PERTH); 70 mi (112 km) N of Sandstone towards Wiluna, R.D. Royce 10368 (MEL, PERTH).

Using Bentham's (1864) classification *A. jamesiana* should be placed in series *Juliflorae-Stenophyllae* close to *A. resinomarginea* W.V. Fitzg. Both species possess long, striate phyllodes which are normally rhombic in cross section (rarely flat) and dense, non-globular flower-heads. *Acacia jamesiana*, however, is distinguished by its branchlets and phyllodes which lack resin-ribs, its coarser, more rigid phyllodes without delicately curved apices, its more deeply dissected calyx, its slightly shorter and broader spikes, its larger legumes and its larger, blackish seeds. The uncommon flat phyllode forms of *A. jamesiana* superficially resemble *A. heteroneura* Meisn. but are distinguished by their denser flower-heads and larger legumes and seeds.

This species is named in honour of my good friend and colleague Dr James Hamlyn Willis whose contribution to Australian botany has been immense (see *Muelleria* 3(2): 69-88, 1975).

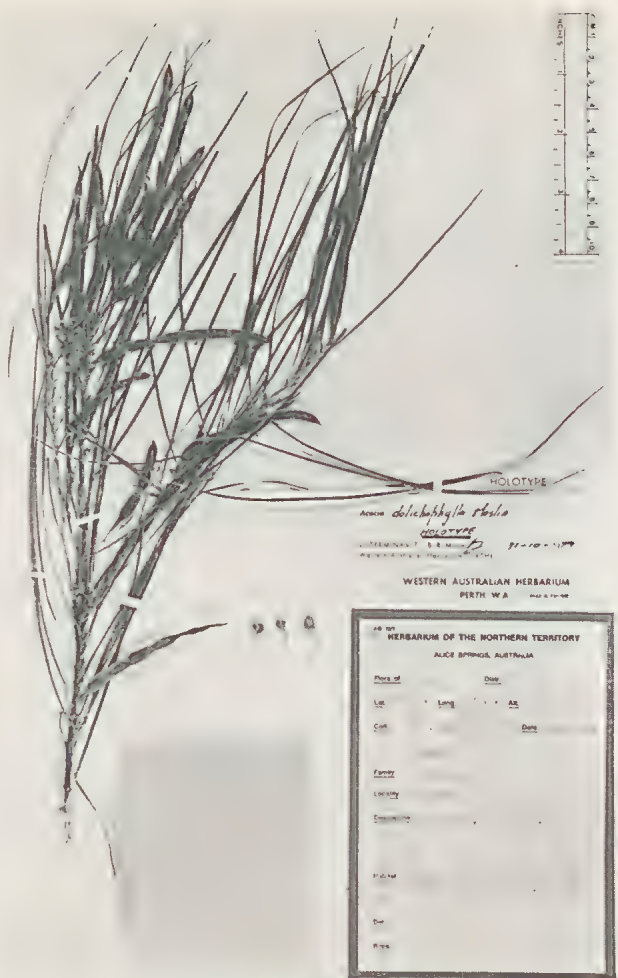


Fig. 3. *Acacia dolichophylla* sp. nov.
(P.K. Latz 6606, holotype—PERTH).

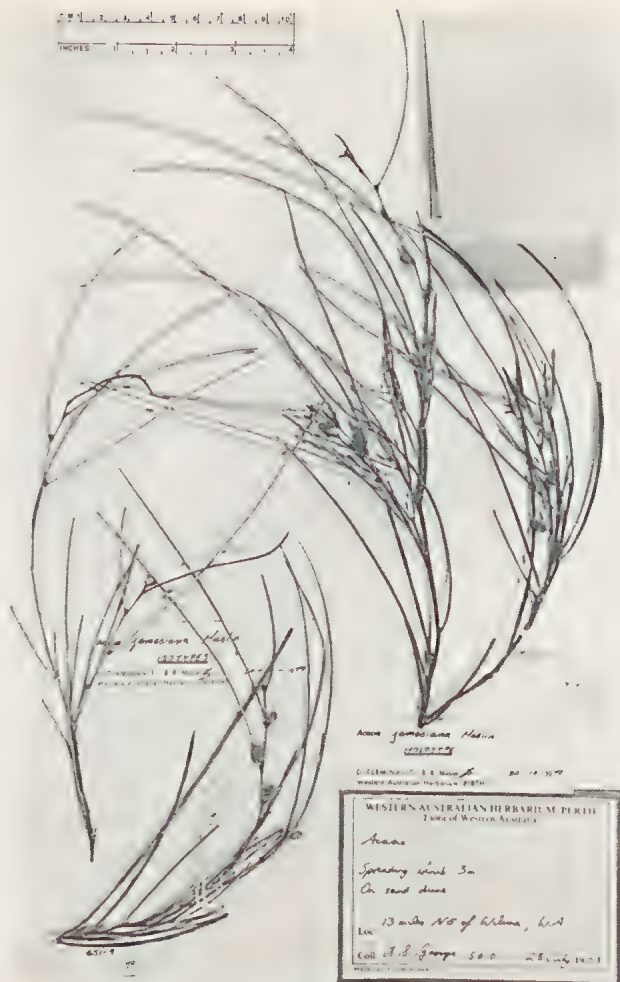


Fig. 4. *Acacia jamesiana* sp. nov.
(A.S. George 5610, holotype and isotypes—PERTH).

9. *Acacia latzii* Maslin sp. nov. (Fig. 5.)

Arbor ad 5 m alta; *ramuli* apicem versus sparsim appresso-puberuli. *Phyllodia* late linearia ad angustissime oblanceolata, 5-10 cm x 2-4 mm, L/B = 20-33, plana. *Inflorescentia*: racemus brevis 2-5-ramosus; *pedunculi* 5-9 mm longi; *capitula* parva, 13-18-floribus, resinacea. *Florae* 5-merae. *Legumina* (immatura) late-linearia, ad 15 cm x 5 mm, coriacea, plana, reticulata.

Type: Beddome Range, New Crown Station, 25° 49'S, 134° 20'E, Northern Territory. "Tree to 5 m, dark fissured bark. Infrequent in gullies in tabletop hills, skeletal soils, (E.B.G.)." 21 April 1977, P.K. Latz 6891 (holo: NT; iso: AD, CANB, K—I have seen only the AD and NT specimens).

Bushy trees to 5 m tall; bark dark grey and fissured; branchlets terete, very finely nerved, very slightly resinous, dark reddish to grey but apically yellowish, sparsely appressed white puberulous. Stipules caducous. Phyllodes broad-linear to very narrow-ob lanceolate, 5-10 cm long, 2-4 mm wide, L/B = 20-33, flat, not particularly rigid, slightly curved and sometimes very shallowly sigmoid due to recurved apices, drying grey to greyish-green, hoary (hairs appressed and often very indistinct), longitudinally multistriate, nerves very indistinct but the central one sometimes slightly more evident than the rest; apices rather abruptly narrowed into slightly recurved, acute, brown points which are sometimes coarsely pungent; pulvinus 1-2.5 mm long, transversely wrinkled, often indistinct; gland obscure, situated on adaxial margin of phyllode 1-4 mm above the pulvinus, lamina slightly swollen about the gland. Inflorescences condensed 2-5-branched racemes, axes 1.5-5 mm long and densely white tomentose; peduncles 5-9 mm long, sparsely antrorsely puberulous, basal bract caducous and seminavicular; flower-heads small, c. 4 mm diam. at anthesis, 13-18-flowered, resinous. Bracteoles 0.5 mm long, ± spatulate, laminae moderately puberulous abaxially. Flowers 5-merous, 1.2 mm long; calyx 1/3-1/2 length of corolla, dissected ± to base into oblong sparsely puberulous sepals; petals glabrous, obscurely 1-nerved. Legumes (immature) broad-linear, to 15 cm long, 5 mm wide, coriaceous, curved, flat, glabrous, slightly resinous, reticulate, acute at both ends; margins thickened yet narrow, yellowish, slightly or sometimes prominently constricted between seeds. Seeds immature.

Distribution (Fig. 8)

Known only from two Northern Territory localities, viz. Beddome Range on New Crown Station (25° 49'S, 134° 20'E) and Tempe Downs Station (24° 36'S, 132° 54'E).

Habitat

Low, hilly country where it favours skeletal soils in steep gullies. These hills often form mesas or buttes and have a hard rock capping underlain by clay, siltstone and shale (P.K. Latz, pers. comm.).

Flowering and fruiting period

Judging from the few specimens at hand flowering occurs in April-May while fruits with immature seeds occur in late September.

Specimens seen

NORTHERN TERRITORY: Beddome Range, 25° 48'S, 134° 20'E, P.K. Latz 5238 (BRI, CANB, NT, PERTH); Tempe Downs Station, 24° 36'S, 132° 54'E, P.K. Latz 5763 (BRI, DNA, NSW, NT, PERTH).

The new species occurs in Bentham's (1864) series *Plurinerves-Microneurae* and seems most closely allied to *A. calcicola* Ford et Ising with which it had sometimes been confused in the past. *Acacia latzii*, however, is distinguished by its smaller flower-heads bearing fewer flowers (13-18 compared with 30-60) and its flat, coriaceous, glabrous, reticulate legumes (± moniliform, woody, hoary and not reticulate in *A. calcicola*). Additionally the branchlet and phyllode indumentum on *A. latzii* tends to be less dense than that of *A. calcicola* and also its peduncles at anthesis are not golden coloured. *Acacia*

callicola, unlike *A. latzii*, is common in Central Australia and grows on limestone or sand over limestone (P.K. Latz, pers. comm.).

The new species is named in honour of Mr Peter Latz, Arid Zone Research Institute, Alice Springs, upon whose fine collections the above description is based.

10. ***Acacia nelsonii* Maslin sp. nov. (Fig. 6.)**

Arbor fruticulosa 3-4 m alta; *cortex* in ramulis lateralibus "Minni Ritchi". *Phyllodia* linearia, acuminata, 12-18 cm x 1.5-2 mm, plana, glabra, tenuissime multistriata. *Inflorescentia* racemus brevissimus 1-2-ramosus; *pedunculi* 2-10 mm longi; *capitula* cylindrica, ad anthesin 2 cm longa. *Flores* 5-meri; *calyx* breviter lobatus. *Legumina* submoniliformia, ad 9 cm x 4 mm, glabra. *Semina* in legumine longitudinalia, 4-4.5 x 2.5-3 mm, nigra.

Type: Atherrita Bore, Todd River Station, 24° 26'S, 134° 52'E, Northern Territory. "Tree to 4 m, flowering almost finished, red peeling bark, phyllodes erect. Flowering sparse on all trees." 21 Aug. 1979, J.R. Maconochie 2507 (holo: PERTH, iso: NT, PERTH).

Shrubby trees 3-4 m tall; bark grey and fibrous on main trunk to c. 2 m above ground level but then becoming typical "Minni Ritchi" (i.e. red and exfoliating in narrow curly strips) on lateral branches but not on branchlets; branchlets terete, very obscurely nerved, glabrous. Stipules caducous. Phyllodes linear but acuminate with slightly curved apices, 12-18 cm long, 1.5-2 mm wide, flat, not rigid, straight to slightly curved, glabrous, bright green when young but becoming subglaucous with age due to a light grey flaking epidermis, very finely longitudinally multistriate, central nerve barely more evident than the remaining nerves; pulvinus 2-3 mm long, transversely wrinkled, yellow to brown; gland very indistinct, situated on upper margin of phyllode at distal end of the pulvinus. Inflorescences 1-2-branched condensed axillary racemes, axes 1-3 mm long and sometimes growing out at their apices; peduncles 2-10 mm long, resinous-papillose but becoming glabrous; spikes light golden, not particularly dense, c. 2 cm long at anthesis, to 3.5 cm when in fruit; receptacles glabrous. Bracteoles linear-spathulate, c. 1 mm long, somewhat caducous, puberulous abaxially. Flowers 5-merous, c. 1.5 mm long; calyx c. 1/2 length of corolla, dissected for c. 1/6 its length into broad-triangular, scarcely thickened, slightly inflexed lobes, tube rather broad, nerveless and moderately puberulous, commonly light brown; petals ± nerveless, glabrous. Legumes submoniliform, to 9 cm long, 4 mm wide, firmly chartaceous to slightly brittle, glabrous, longitudinally wrinkled, yellowish-brown, margins not thickened. Seeds longitudinal in legume, obloid-ellipsoid, 4-4.5 x 2.5-3 mm, black, not mottled, shiny; pleurogram very fine, open towards the hilum, bordered by a narrow band of yellowish tissue; areole u-shaped, c. 0.7 x 0.5 mm; funicle flattened and folded below a moderately thickened white aril.

Distribution (Fig. 8)

Known only from Atherrita Bore, Rodinga Range, and several dry water courses at the base of Trains Hills on Todd River Station, Northern Territory (24° 26'S, 134° 52'E).

Habitat

Beds of rocky water courses draining from Atherrita Range.

Flowering and fruiting period

It is not known when anthesis commences, but specimens just finishing flowering have been collected in August and September. Legumes with mature seeds have been collected in mid-October.

Specimens seen

NORTHERN TERRITORY: Atherrita Bore, Todd River Station, 24° 26'S, 134° 52'E, J.R. Maconochie 466 (NT, PERTH), 2505 (NT, PERTH), 2506 (NT, PERTH), 2508 (NT) and D.J. Nelson 1305 (AD, NT) and 2481 (NT, PERTH).

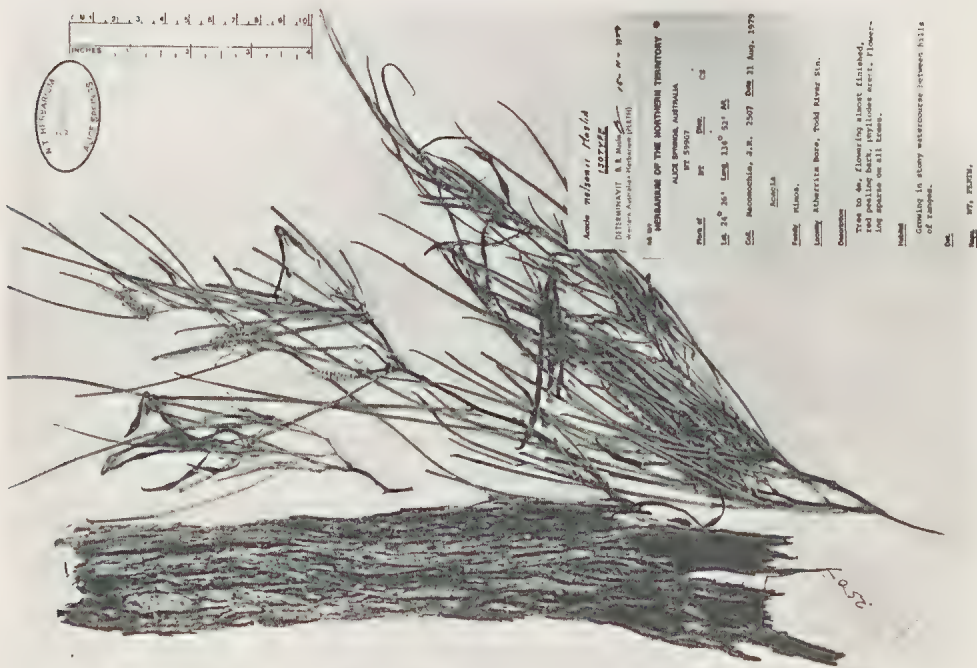


Fig. 6. *Acacia nelsonii* sp. nov. (J.R. Macdonald 2507, isotype—NT).

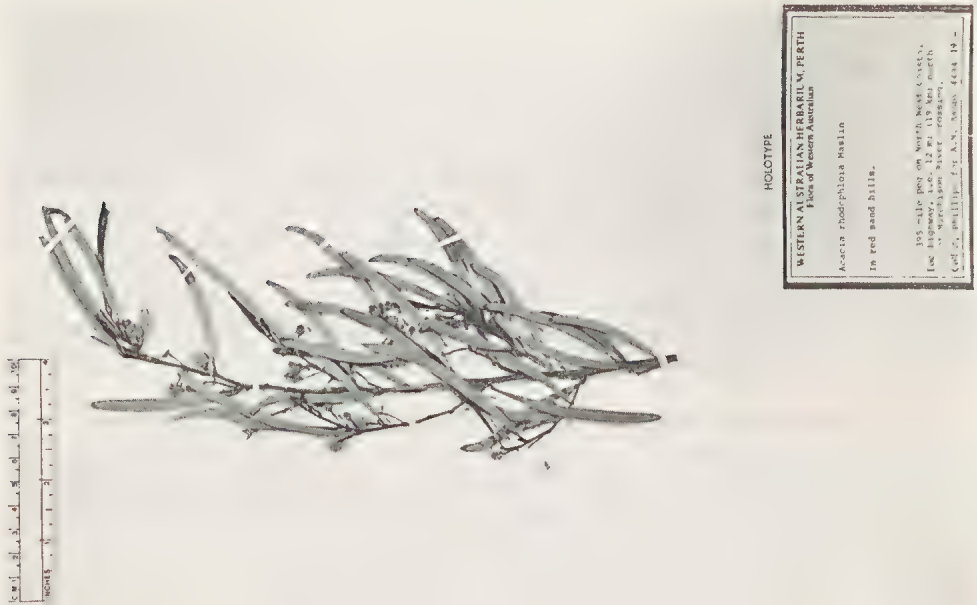


Fig. 7. *Acacia rhodophloia* sp. nov. (G. Phillips for A.M. Ashby 4494, holotype—PERTH).

Using Bentham's (1864) classification *A. nelsonii* should be placed in series *Juliflorae-Stenophyllae* and is most closely allied to *A. rhodophloia* Maslin (sp. 13 below) on account of its bark and general phyllode, inflorescence and seed characters. However, sufficient differences exist to warrant specific rank for this restricted, endemic Northern Territory plant. Both species have "Minni Ritchi" bark on their lateral branches but *A. nelsonii* differs in that towards the base of its main trunks (to 2 m above ground level) this red bark is replaced by a dark grey, fibrous layer which does not exfoliate in narrow curly strips. Other characters distinguishing *A. nelsonii* from the more widely distributed *A. rhodophloia* include its acuminate phyllodes which are longer, narrower, less rigid and possessing a light grey flaking epidermis, its short racemose inflorescences, its less dense spikes which are never reduced to globular heads, its submoniliform legumes and its glossy black seeds which are never mottled.

The species is named in honour of Mr D.J. Nelson, Division of Land Resources Management, CSIRO, Alice Springs, in recognition of his contribution to botanical exploration in Northern Territory.

11. *Acacia papyrocarpa* Benth., Flora Austral. 2: 338 (1864); Whibley D.J. (1980), *Acacias of South Australia*, p.172.

Lectotype: Inlet XII South Coast, R. Brown, Iter Australiense, 1802-5, upper left hand specimen on sheet bearing Bennett(?) distribution number 4343 (BM; iso-lectotypes -BM, the remaining specimens on the same sheet), *lecto. nov.*

Acacia sowdenii Maiden, J. Roy. Soc. N.S.W. 53: 180 t.11 (1919).

Holotype: Port Augusta, South Australia, Jan. 1907, J.H. Maiden s.n. (NSW; iso: K. PERTH).

It is unfortunate that the well known name (*A. sowdenii*) for "Western Myall" must be changed. However, having inspected the type collection of both *A. papyrocarpa* and *A. sowdenii* it is apparent that the taxa are conspecific and following my suggestion Whibley (1980) first effected the synonymy. Both types are in fruit and share the following significant characters: phyllodes flat, finely longitudinally multistriate, silvery appressed puberulous (at least when young), apices attenuate and delicately curved; legumes chartaceous, flat, c. 1 cm wide, reticulate; seeds compressed. The collections exhibit slight differences e.g. branchlet indumentum, phyllode width and seed length, but these are not considered significant. The type of *A. papyrocarpa* was collected by Robert Brown from "Inlet XII" which is in the vicinity of Mount Brown at the head of Spencer Gulf, S.A. The type of *A. sowdenii* was collected by J.H. Maiden from Port Augusta, S.A., which is very close to Brown's locality. Maiden (1920, p. 182) misinterpreted *A. papyrocarpa* resulting in his describing this species as *A. sowdenii*. The plant which Maiden thought to be *A. papyrocarpa* was probably one collected by Max Koch from Mt Lyndhurst, S.A., a plant possibly representing an undescribed species—(see species no. 73 in the forthcoming account of *Acacia* in the 'Flora of Central Australia'). Black (1924, 1948) seems to have followed Maiden's interpretation although his 1924 description of "*A. ? papyrocarpa*" is evidently based on mixed gatherings (including elements of *A. havilandii* Maiden, *A. papyrocarpa* and the M. Koch, Mount Lyndhurst material—D.J. Whibley, pers. comm.).

12. *Acacia prainii* Maiden, J. Roy. Soc. N.S.W. 51: 238 (1917); Whibley, D.J. (1980), *Acacias of South Australia*, p.96.

Lectotype: Southern Cross, Western Australia, October 1909, J.H. Maiden s.n., (NSW—the longer of the two specimens on the sheet; iso-lectotype—K, NSW), *lecto. nov.*

A. prolifera J.M. Black, Trans. Roy. Soc. S. Austral. 44: 375 t.22 (1920).

Holotype: Barton or Wynbring, South Australia, 22 Sept. 1920, J.M. Black s.n. (AD; isotype—K, NSW).

A. dentifera var. *parvifolia* S. Moore, J. Proc. Linn. Soc. Bot. 45: 174 (1920), *synon. nov.*

Lectotype: Bruce Rock, Western Australia, 1916, *F. Stoward* 333 (BM; iso-*lectotype* at PERTH), *lecto. nov.*

Lectoparatype: Mount Marshall, Western Australia, 1916, *F. Stoward* 451 (BM).

Having examined the type collection of both *A. prainii* and *A. prolifera* I consider that these two names should be regarded as synonymous. Both types are in flower and share the following diagnostic features: branches glabrous, nerves yellowish and resinous; phyllodes glabrous, \pm pungent, midribs and marginal nerves yellowish and resinous, glands 2 along adaxial margin; inflorescences glabrous racemes; sepals free. The only real differences between the two types is that *A. prainii* has shorter phyllodes (c. 3 cm compared with 5-9 cm) and younger inflorescences which have not grown out as leafy shoots. Neither difference is considered significant. Black (1924) treated *A. prolifera* as a synonym of *A. prainii*. However, in 1948 he accepted the name *A. prolifera* but noted that legumes were required to establish its relationship with *A. prainii*. I have not found any carpological characters that warrant the recognition of two taxa.

13. *Acacia rhodophloia* Maslin sp. nov. (Fig. 7.)

Frutex vel *arbor* ad 4 m alta; *cortex* "Minni Ritchi". *Phyllodia* linearia ad anguste-elliptica vel anguste-oblongeolata, (1.5)2.5-10 cm x 2-8(13) mm, L/B = (3)5-50, plana, subtiliter multistriata. *Pedunculi* (5)8-20 mm; *capitula* \pm globosa ad cylindrica, aliquantum densa. Flores plerumque 5-meri; *calyx* longitudine $\frac{3}{5}$ - $\frac{3}{4}$ petalarum partes aequans. *Legumina* linearia, ad 9 cm x 2-6 mm, plana. *Semina* saepe maculata.

Type: 395 mile peg on North West Coastal Highway, i.e. 12 mi (19 km) north of Murchison River crossing, Western Australia. "In red sand hills." No date given, G. Phillips for A.M. Ashby 4494 (holo: PERTH; iso: BM, CANB, K, NY, PERTH).

Normally rounded *shrubs* or small *trees* to 4 m tall and with a number of stems spreading from ground level; *bark* bright red and exfoliating in narrow curly strips i.e. "Minni Ritchi"; *branches* terete, very obscurely nerved, glabrous or apically appressed puberulous, apically resinous (resin sometimes forming a thickish, translucent layer), "Minni Ritchi" bark rarely extending to branch apices; *new shoots* dark brown and resinous or sometimes mealy-canescant. *Stipules* caducous. *Phyllodes* variable, linear to narrow-elliptic or narrow-oblongeolata, (1.5)2.5-10 cm long, 2-8(13) mm wide, L/B = (3)5-50, flat, slightly thickened, rather rigid, normally slightly curved, dull green to subglaucous, sometimes glabrous but normally with inconspicuous appressed hairs restricted to intercostal regions, indumentum often more dense on young phyllodes, resinous (resin sometimes forming a thickish, translucent layer), finely longitudinally multistriate, nerves uniform or some slightly more evident than the rest, \pm abruptly contracted at apices into short acute straight or slightly uncinat hard brown points; *pulvinus* terete, yellowish, 1-3 mm long; *glands* very indistinct, situated on upper margin of phyllode at distal end of the pulvinus. *Inflorescences* axillary, 1 or 2 arising at extreme base of a rudimentary shoot which often grows out; *peduncles* (5)8-20 mm long, often as long as or longer than flower-heads; *flower-heads* \pm globular to distinctly cylindrical, 6-25 mm long, rather dense. *Bracteoles* c. 1.5 mm long, linear-spathulate; *claws* puberulous abaxially especially near their summit, hairs often sparse; *laminae* thickened, \pm inflexed and concave, resinous-papillose and sometimes also puberulous. *Flowers* predominantly 5-merous but occasionally petals or sepals 6, 2-2.5 mm long; *calyx* stout, $\frac{3}{5}$ - $\frac{3}{4}$ length of petals, shortly dissected into broad-triangular or occasionally oblong, slightly thickened and inflexed, often sparsely resinous-papillose lobes, 5-nerved (nerves often obscure), tube normally basally tomentellose (hairs pale yellow or white, sometimes sparse); *petals* connate for $\frac{2}{3}$ their length, \pm obscurely 1-nerved (nerves a little thickened at petal apices), glabrous. *Legumes* linear, slightly curved, to 9 cm long, 2-6 mm wide, \pm cartilaginous to slightly hard and brittle, light grey-brown, minutely resinous-papillose, flat, barely raised over seeds, obscurely longitudinally nerved; *margins* hardly

thickened, not constricted between seeds, slightly broad laterally. *Seeds* longitudinal in legumes, obloid-ellipsoid, 2-4.5 x 1-2.5 mm, black or brown, often mottled, shiny; *pleurogram* very fine, open towards the hilum; *areole* u-shaped, c. 0.2 x 0.3 mm, often yellowish; *funicle* flattened, expanded into a thickened convoluted creamy white *aril*.

Distribution (Fig. 8)

Widespread in the drier areas of Western Australia from the Pilbara-Murchison regions east through the southern parts of the Little Sandy Desert and the Gibson Desert and the northern part of the Great Victoria Desert to the Northern Territory as far as the Ehrenberg Range (23° 20'S, 130° 22'E).

Habitat

Grows in sand or on rocky ground and is frequently associated with "spinifex" (*Triodia* sp.).

Flowering and fruiting period

Flowering is somewhat sporadic but the main period seems to be from June to October. Like many other arid zone species, the incidence of flowering is probably dependent on moisture availability. Legumes with mature seeds have been collected from late September to November.

Selected specimens

WESTERN AUSTRALIA: East Yuna Reserve NE of Geraldton, 13 Aug. 1967, *A. C. Burns* 37 (PERTH); 25.6 km WSW of Warburton Mission, *R. J. Chinnock* 632 (AD, PERTH); 11.5 km N of Roy Hill, *H. Demarz* 7014 (PERTH, TLF); 65 km W of Millstream, *H. Demarz* 7084 (PERTH, TLF); Meekatharra, *C. A. Gardner* 2353 (PERTH); 53 mi (85 km) S of Giles Meteorological Station, *J. R. Maconochie* 813 (NT, PERTH); About 43 km N of Murchison River on North West Coastal Highway, *B. R. Maslin* 3152 (AD, B, BH, BM, BRI, K, PERTH, RH); Between wells 6 and 7, Canning Stock Route, *H. M. Wilson* 28 (PERTH).

NORTHERN TERRITORY: Ehrenberg Range, 23° 20'S, 130° 22'E, *J. R. Maconochie* 1373 (NT, PERTH); Rowley Range, 24° 39'S, 129° 45'E, *J. R. Maconochie* 1926 (AD, BRI, CANB, NT, PERTH).

Specimens of *A. rhodophloia* were formerly referred to as *A. sibirica* S. Moore but as was shown by Pedley (1978, p. 154) the latter species is a taxonomic synonym of *A. kempeana*. Using Bentham's (1864) classification the new species should be placed in series *Juliflorae-Stenophyllae* and is most closely allied to *A. nelsonii* Maslin—see sp. 10 above for distinguishing features. In its general phyllode and inflorescence morphology *A. rhodophloia* often resembles some forms of *A. stowardii* Maiden (syn. *A. clivicola* Pedley) but is distinguished by its "Minni Ritchi" bark, its normally appressed puberulous phyllodes and branchlet apices and its often longer and narrow, \pm cartilaginous to slightly hard and brittle (not chartaceous) legumes. Another desert species having affinities to *A. rhodophloia* is *A. adsurgens* Maiden et Blakely. Both these taxa have elongate, multistriate phyllodes, dense spicate inflorescences, and similar calyx and legume characters. *Acacia rhodophloia*, however, is readily recognized by its "Minni Ritchi" bark and its shorter phyllodes (9-20 cm in *A. adsurgens*).

There is considerable variation in the material I have here referred to *A. rhodophloia* and future work may well indicate that more than one species should be recognized. Specimens from the type locality (i.e. Murchison River area of W.A.) have broad phyllodes (3-8 mm, L/B = 8-20), short, obloid or even \pm globular flower-heads and narrow legumes (2 mm). Further east in the Central Australian desert areas the phyllodes tend to be narrower (2-4 mm, L/B = 8-50), the spikes distinctly cylindrical and the legumes slightly broader (3-4 mm).

In the Pilbara region of Western Australia there exists a variant allied to *A. rhodophloia* on account of its "Minni Ritchi" bark, general phyllode morphology, and spicate inflorescences. It differs, however, in its taller stature (to 8 m), interrupted spikes and nerveless, white-fimbriate, smaller calyces. Until legumes are known and further field

studies made, this variant will not be formally described. The specimens seen and referable to this variant are: Spear Hill, 21° 31'S, 119° 25'E, *J.S. Beard* 4627 (PERTH); Maroonah, 23° 29'S, 115° 33'E, *J.S. Beard* 6178 (PERTH); 10 km S of Minnie Creek homestead, 24° 04'S, 115° 42'E, *A.A. Mitchell* 76/3 (PERTH); Pingandie Station, c. 24° S, 117° 50'E, 1972, *M. Scott s.n.* (PERTH).

The specific epithet refers to the characteristic bright red ("Minni Ritchi") bark which exfoliates in narrow curly strips rendering this species one of the most attractive in the genus.

14. *Acacia tetragonophylla* F. Muell., *Fragm. Phyt. Austral.* 4: 3 (1863); *J. Linn. Soc. Bot.* 3: 121 (1859), *pro syn.*

Lectotype: Darling River, *Dallachy* and *Goodwin* (MEL—right hand specimen on sheet; iso-lectotype: BM, K, MEL), *lecto. nov.*

Lectoparatypes: Cooper's Creek, *J. Murray* (K, MEL); Top of Mount Murchison (presumably *Dallachy* and *Goodwin*, label torn obliterating collectors names—MEL); Yaginga Mountains, *Beckler* (K, MEL).

Acacia genistoides A. Cunn. ex Benth., *Flora Austral.* 2: 330 (1864), *synon. nov.*

Lectotype: Dirk Hartog Island, 7 Jan. 1822, *A. Cunningham* 324 (K—right hand specimen on sheet; iso-lectotype: K., left hand specimen on the same sheet), *lecto. nov.*

Lectoparatypes: Shark Bay, *Milne* (K); South Hutt River, *Oldfield* (K); Near Mt. Curious, *Oldfield* (K, MEL).

Both *Acacia tetragonophylla* and *A. genistoides* were described from more than one gathering but having examined most of these at both Kew (K) and Melbourne (MEL) I have no hesitation in regarding the taxa conspecific. The species is at once recognized by its pungent, fasciculate mature phyllodes. However, on new shoots the phyllodes are solitary (not clustered) while on mature branches they are frequently lost during the drying process. These factors probably contributed to Bentham describing *A. genistoides* as a distinct species. The legume and phyllode differences between *A. tetragonophylla* and *A. genistoides* noted by Bentham (1864, p. 331) are not considered by me significant enough to warrant the recognition of two species. I have collected from Cape Inscription, Dirk Hartog Island, the locality where Alan Cunningham collected the plant here designated the lectotype of *A. genistoides*. The plants at this locality are typical *A. tetragonophylla* in all respects except that they are lower and more spreading than normal, probably due to the effect of wind-pruning.

15. *Acacia victoriae* Benth. in Mitch., *J. Trop. Austral.* 333 (1848).

Acacia sentis F. Muell., *Plant. Indig. Colon. Vict.* 2: 18 (1863); *J.M. Black, Flora S. Austral. Part 2: 277* (1924).

Acacia sentis var. *victoriae* (Benth.) Domin, *Biblioth. Bot.* 89: 254 (1926), *nom. illeg.*; *Pedley, Austro-baileya* 1(3): 271 (1980).

Acacia hanniana Domin, *Biblioth. Bot.* 89: 253 (1926); *Pedley op. cit.*

Acacia coronalis J.M. Black, *Trans. Roy. Soc. S. Austral.* 71(1): 20 (1947), *synon. nov.*

Type citation: "Crown Point, River Finke, Central Australia" (n.v.).

Mr John Maconochie, Arid Zone Research Institute, Alice Springs, first suggested to me that *A. coronalis* may be conspecific with *A. victoriae*. It is regrettable that Black's type is not available for examination having been misplaced whilst on loan to another institution from AD. Nevertheless from an examination of Black's protologue I am convinced that *A. coronalis* should be reduced to synonymy under *A. victoriae*. The salient parts of the description bringing me to this conclusion are: small, flat, 1-nerved, pinnately veined phyllodes, normally spiny stipules, small flower-heads (20-25 flowered) on slender peduncles which are solitary, twin or in 3's, racemose inflorescences, 5-merous flowers and linear-spathulate sepals. Legumes from the type locality were unknown to Black.

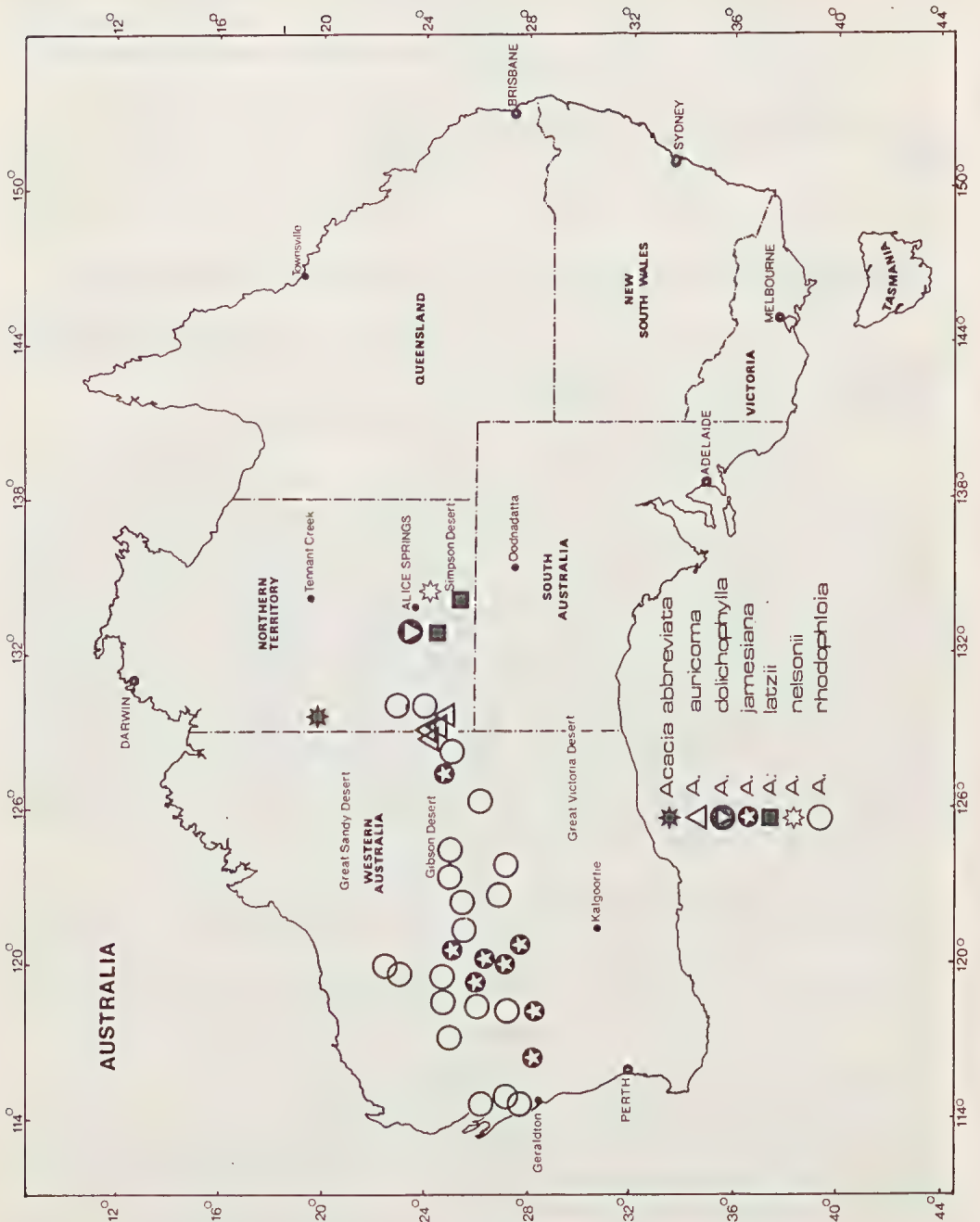


Fig. 8. Distribution map of *Acacia abbreviata*, *A. auricoma*, *A. dolichophylla*, *A. jamesiana*, *A. latzii*, *A. nelsonii* and *A. rhodophloia*.

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Index to numbered specimens

Index to numbered specimens seen in the compilation of new species descriptions given herein. The numbers in brackets refer to species numbers in the text.

Ashby, A.M.—see Phillips, G. below; Bailey, E.L. 1-28 (13); Beard, J.S. 4784 (8), 6665 (8), 6674 (8), 6727 (13), 7095 (13); Blackwell, M. 19 (8), 20 (8), 21 (8), 166 (8); Buckley, R. NT 59902 (8); Burbidge, A.A. 11 (8); Burns, A.C. 37, 13 Aug. 1967 (13) and 86, 1 Oct. 1967 (13); Chinnock, R.J. 632 (13), 860 (13); Demarz, H. 4396 (13), 4717 (13), D5681 (13), 7014 (13), D7084 (13); Dunlop, C.R. 2342 (1); Edmiston, R. 278 (13); Fairall, A. 1927 (13), 2043 (13); Gardner, C.A. 2317 (13), 2353 (13); George, A.S. 4661 (13), 5455 (13), 5466 (13), 5610 (8—Type), 12001 (13), 12094 (2); Gillett, M. 42 (13); Gordon, D.M. 3833 (13); Hill, R. and Lothian, T.R.N. 838 (13); Latz, P.K. 5238 (9), 5763 (9), 6606 (6—Type), 6642 (6), 6891 (9—Type); Lay, B. 909 (13); Lullfitz, F. 3184 (8), L4322 (13); Maconochie, J.R. 466 (10), 813 (13), 1026 (1—Type), 1099 (1), 1373 (13), 1395 (2—Type), 1400 (13), 1726 (1), 1632 (1), 1850 (13), 1926 (13), 2505 (10), 2506 (10), 2507 (10—Type), 2508 (10); Maslin, B.R. 2788 (13), 3152 (13), 3339 (13), 3609 (13); Mitchell, A.A. 218 (13); Nelson, D.J. 2481 (10), 1305 (10); Phillips, G. for Ashby, A.M. 4494 (13—Type), 4830 (13); Royce, R.D. 10362 (8), 10368 (8); Speck, N.H. 984 (13), 1140 (8); Tindale, M.D. 1323 (13); Wauchope, J. NT46725 (6); Wilson, H.M. 28 (13); Wilson, P.G. 7440 (13).